

isc Silicon PNP Power Transistor

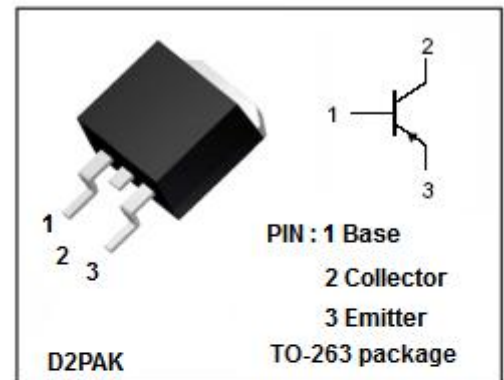
2SA1069A-Z

DESCRIPTION

- Low Collector Saturation Voltage
- Fast Switching Speed
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

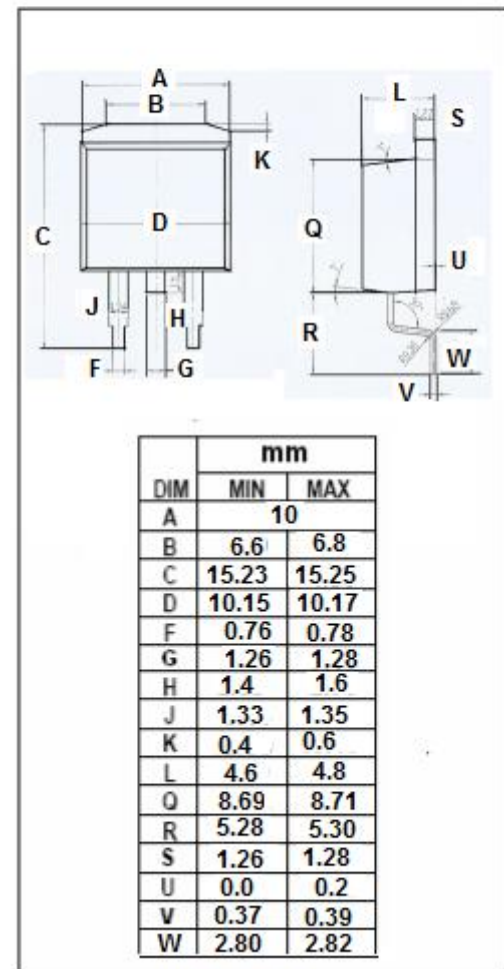
APPLICATIONS

- Designed for high-speed switching, and is ideal for use as a driver in devices such as switching regulators, DC/DC converters, and high frequency power amplifiers.



ABSOLUTE MAXIMUM RATINGS(T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CBO}	Collector-Base Voltage	-80	V
V _{CEO}	Collector-Emitter Voltage	-80	V
V _{EBO}	Emitter-Base Voltage	-12	V
I _C	Collector Current-Continuous	-5	A
I _{CM}	Collector Current-Peak	-10	A
I _B	Base Current-Continuous	-2.5	A
P _C	Collector Power Dissipation @ T _a =25°C	1.5	W
	Total Power Dissipation @ T _c =25°C	30	
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-55~150	°C



isc Silicon PNP Power Transistor**2SA1069A-Z****ELECTRICAL CHARACTERISTICS**T_c=25°C unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V _{CEO(SUS)}	Collector-Emitter Sustaining Voltage	I _C = -3.0A ; I _B = -0.3A, L=1mH	-80		V
V _{CEX(SUS)-1}	Collector-Emitter Sustaining Voltage	I _C = -3.0A ; I _{B1} =-I _{B2} = -0.3A, V _{BE(OFF)} =5.0V, L=180 μ H,clamped	-80		V
V _{CEX(SUS)-2}	Collector-Emitter Sustaining Voltage	I _C = -6.0A ; I _{B1} = -0.6A; I _{B2} = -0.3A, V _{BE(OFF)} = 5.0V, L= 180 μ H,clamped	-80		V
V _{CE(sat)} ^{NOTE}	Collector-Emitter Saturation Voltage	I _C = -3.0A; I _B = -0.3A		-0.6	V
V _{BE(sat)} ^{NOTE}	Base-Emitter Saturation Voltage	I _C = -3.0A; I _B = -0.3A		-1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = -60V; I _E = 0		-10	μ A
I _{CER}	Collector Cutoff Current	V _{CE} = -80V; R _{BE} = 51 Ω , T _a =125°C		-1.0	mA
I _{CEx}	Collector Cutoff Current	V _{CE} = -80V; V _{BE(off)} = -1.5V V _{CE} = -80V; V _{BE(off)} = -1.5V, T _a =125°C		-10 -1.0	μ A mA
I _{EBO}	Emitter Cutoff Current	V _{EB} = -5V; I _C =0		-10	μ A
h _{FE-1} ^{NOTE}	DC Current Gain	I _C = -0.3A; V _{CE} = -5V	40		
h _{FE-2} ^{NOTE}	DC Current Gain	I _C = -3.0A; V _{CE} = -5V	40	200	
Switching times					
t _{on}	Turn-on Time			0.5	μ s
t _{stg}	Storage Time	I _C = -3.0A ,R _L = 17 Ω , I _{B1} = -I _{B2} = -0.3A,V _{CC} ≈-50V		2.5	μ s
t _f	Fall Time			0.5	μ s

NOTE:Pulse test PW≤350us,duty cycle ≤2%

◆ **h_{FE-2} Classifications**

M	L	K
40-80	60-120	100-200

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